

PATENT

## LISTING OF CLAIMS

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Please amend the claims as follows:

1. (Previously presented) A method for the reduction of fouling of process components within a liquid hydrocarbon stream comprising the steps of:

applying an electric charge to an object within a flow path of said liquid hydrocarbon stream for more than 5 minutes, wherein said liquid hydrocarbon stream contains at least one contaminant;

flowing said liquid hydrocarbon stream past said electric charge; and then

adjusting the magnitude of said electric charge while continuing said flowing step.

Claims 2-4 (Cancelled).

5. (Previously presented) The method according to Claim 1, wherein said object is a heat exchanger.

6. (Previously presented) The method according to Claim 5, wherein said step of applying the electric charge comprises applying an electric charge to the chassis or shell of said heat exchanger.

Claims 7-13 (Cancelled).

14. (Previously presented) The method of Claim 1, further comprising determining a level of contaminants in the liquid hydrocarbon stream.

15. (Previously presented) The method of Claim 14 wherein said step of determining a level of contaminants utilizes measurement of the turbidity of the fluid stream or an analytical measurement indicative of contaminant concentration of the liquid hydrocarbon stream.

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Claims 16-26 (Cancelled).

27. (Previously presented) A method for improved hydrocarbon refining efficiency comprising the steps of:

- catalytically cracking a liquid hydrocarbon mixture to produce an output mixture enhanced in low molecular weight liquid hydrocarbons relative to said hydrocarbon mixture;
- separating by distillation said output mixture into petroleum fractions;
- drawing a liquid hydrocarbon stream from said petroleum fractions;
- flowing said liquid hydrocarbon stream through a heat exchanger;
- repeating said step of separating or said steps of catalytically cracking and separating on said liquid hydrocarbon stream;
- applying an electric charge to an object within a flow path of said liquid hydrocarbon stream for more than 5 minutes;
- flowing said liquid hydrocarbon stream past said electric charge; and
- adjusting the magnitude of said electric charge while continuing said flowing step.

28. (Cancelled).

29. (Previously presented) A method for the prevention of process component fouling within a liquid hydrocarbon stream, comprising the steps of:

- initiating an electric charge to one or more process components for contacting a liquid hydrocarbon stream, wherein said liquid hydrocarbon stream contains at least one contaminant;
- initiating a flow of the liquid hydrocarbon stream past the electric charge and the one or more process components;
- applying the electric charge to the flowing liquid hydrocarbon stream for more than 5 minutes; and then
- adjusting the electric charge as the liquid hydrocarbon stream flows in fluid communication with the one or more process components.

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30. (Previously presented) The method according to Claim 29, wherein the one or more process components comprises a heat exchanger.
31. (Previously presented) The method according to Claim 30, wherein the electric charge is applied to a chassis or shell of said heat exchanger.
32. (Cancelled).
33. (Cancelled).
34. (Currently Amended) A method for processing a liquid hydrocarbon process stream, comprising:  
initiating a process run of a liquid hydrocarbon process stream through one or more process components adapted to exchange heat with the liquid hydrocarbon process stream;  
initiating an electric charge to at least one of the one or more process components;  
flowing the liquid hydrocarbon process stream in fluid communication with the at least one of the one or more process components having the electric charge applied thereto;  
applying the electric charge to the at least one of the one or more process components during the process run while the liquid hydrocarbon process stream is in fluid communication therewith, wherein the process run lasts more than 5 minutes; and  
~~The method according to Claim 32, further comprising~~ adjusting the electric charge to the at least one of the one or more process components during the process run.
35. (Currently Amended) The method according to Claim ~~32~~ 34, wherein the one or more process components comprises a heat exchanger.
36. (Previously presented) The method according to Claim 35, wherein the electric charge is applied to a chassis of said heat exchanger.

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37. (Previously presented) The method according to Claim 35, wherein the electric charge is applied to a shell of said heat exchanger.

38. (Currently amended) The method according to Claim ~~[[33]]~~ 35, wherein further comprising adjusting the electric charge to the at least one of the one or more process components during the process run comprises adjusting the electric charge to the shell of the heat exchanger.

39. (Cancelled).